UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,622	01/20/2004	John T. Beck	15437-0592	3546

45657   7590   04/07/2008
HICKMAN PALERMO TRUONG & BECKER, LLP
AND SUN MICROSYSTEMS, INC.
2055 GATEWAY PLACE
SUITE 550
SAN JOSE, CA 95110-1089

EXAMINER
VERDI, KIMBLEANN C

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
04/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _28 February 2008_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _28,29,32-41,44-52 and 55-60_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _28,29,32-41, 44-52, and 55-60_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _September 13, 2007, January 20, 2004_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _December 22, 207_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claims 28-29, 32-41, 44-52, and 55-60 are pending in the current application.

Specification

1.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: claims 40-51 refer to a machine-readable storage medium,

however the specification does not disclose a machine-readable storage medium.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

3.   Claims 40-51 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 40-51 recite a "machine readable storage medium" and the specification

fails to provide antecedent bases for this limitation [see objection to the specification

above]. Without antecedent basis for "machine readable storage medium", it is unclear

if the limitation intended to be the same as the storage media described as part of the

disclosed program product or whether it's intended to be broader than the disclosed

storage media. It is believed that the limitation "machine readable storage medium" is

intended to claim something broader than the disclosed storage media and cover

signals, waves and other forms of transmission media, that carry instructions. In

addition, in accordance with Applicant's specification Applicant discloses a machine

readable medium which may be acoustic or light waves, such as those generated

during radio-wave and infra-red data communications or carrier wave (as disclosed on

paragraphs [0092]-[0093] of Applicant's specification). Therefore, the limitation

"machine readable storage medium" is not limited to physical articles or objects which

constitute a manufacture within the meaning of 35 USC 101 and enable any

functionality of the instructions carried thereby to act as a computer component and

realize their functionality. As such, the claim is not limited to statutory subject matter

and is therefore non-statutory.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 28-29, 32-41, 44-51, and 55-60 are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the written description requirement. The claim(s)

contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

application was filed, had possession of the claimed invention.

      Claims 28, 40, and 52 the recitation of "wherein the first and second non-global

zones are established by the OS kernel" is not disclosed in the specification. Thorough

review of the specification by the Examiner did not result in finding of the subject matter

properly disclosed in the specification.

Claims 29, 32-39, 41, 44-51 and 55-60 are rejected since they are dependent on

independent claims 28, 40, and 52.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 28-29, 32-41, 44-51, and 55-60 rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

8.   The term "established" in claims 1-2, 4, 8-9, 11, and 15 is a relative term which

renders the claim indefinite. The term " established " is not defined by the claim, the

specification does not provide a standard for ascertaining the requisite degree, and one

of ordinary skill in the art would not be reasonably apprised of the scope of the

invention.

The first and second non-global zones are rendered indefinite by the use of the

term "established". For purposes of examination the first and second non-global zones

established by the OS kernel is interpreted as the first and second non-global zones file

installation is assisted by the OS kernel.

Claims 29, 32-39, 41, 44-51 and 55-60 are rejected since they are dependent on

independent claims 28, 40, and 52.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 28-29, 32-41, 44-52, and 55-60 are rejected under 35 U.S.C. 103(a) as

being unpatentable over 2002/0174215 A1 to Schaefer in view of WO 00/45262 to

Susser et al. (hereinafter Susser), and further in view of 2003/0014466 A1 to Berger et

al. (hereinafter Berger).

11.   As to claim 28, Schaefer teaches the invention substantially as claimed including

a machine-implemented method, comprising:

establishing, within a global operating system environment provided by an

operating system (OS) kernel (Operating System 10, Fig. 1, paragraph [0013]), a first

non-global zone which serves as a first virtual platform for supporting and isolating user

processes (application 52, Fig. 2) (paragraphs [0018]-[0019]),

establishing, within the global operating system environment, a second non-

global zone which serves as a second virtual platform for supporting and isolating user

processes (application 54, Fig. 2) (paragraphs [0018]-[0019]); and

isolating the first set of one or more user processes (application 52, Fig. 2) within

the first non-global zone and the second set of one or more user processes within the

second non-global zone (application 54, Fig. 2) (paragraph [0012]).

Schaefer does not explicitly disclose wherein the first non-global zone is a separate and distinct OS partition of the global operating system environment having a first zone identifier associated therewith, and wherein the first non-global zone is established and exists without requiring any user processes to be running therein;

wherein the second non global zone is a separate and distinct OS partition of the global operating system environment having a second zone identifier associated therewith, and wherein the second non-global zone is established and exists without requiring any user processes to be running therein;

executing a first set of one or more user processes within the first non global zone, wherein each user process in the first set of user processes has the first zone identifier associated therewith;

executing a second set of one or more user processes within the second non-global zone, wherein each user process in the second set of user processes has the second zone identifier associated therewith;

the first set of one or more user processes cannot access processes in the second non-global zone and the second set of one or more user processes cannot access processes in the first non-global zone; and

wherein the first and second non-global zones are established by the OS kernel, and wherein the OS kernel enforces zone boundaries to isolate the first set of one or more user processes within the first non-global zone and the second set of one or more user processes within the second non-global zone.

However Susser teaches wherein the first non-global zone having a first zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the first non-global zone is established and exists without requiring any user processes to be running therein (Context 1, 770, Fig. 7, page 11, lines 29-31);

wherein the second non global zone having a second zone identifier associated therewith (e.g. Unique Name, page 11, line 25), and wherein the second non-global zone is established and exists without requiring any user processes to be running therein (Context 2, 780, Fig. 7, page 11, lines 29-31);

executing a first set of one or more user processes within the first non global zone (Object 440, Fig. 9), wherein each user process in the first set of user processes has the first zone identifier associated therewith (page 11, lines 25-27);

executing a second set of one or more user processes within the second non-global zone (Object 640, 910, Fig. 9), wherein each user process in the second set of user processes has the second zone identifier associated therewith (page 11, lines 25-27); and

the first set of one or more user processes (Object 640, Fig. 6) cannot access processes in the second non-global zone (Object 636, Fig. 6) and the second set of one or more user processes cannot access processes in the first non-global zone (page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the OSGuard of Schaefer with the teachings of a Firewall from Susser because this feature would have provided a mechanism in which each context is separated from the other by a context barrier between the execution contexts (page 11, lines 13-15 of Susser).

In addition Berger teaches wherein the first non-global zone is a separate and distinct OS partition of the global operating system environment (paragraphs [0035]-[0036] and [0045]-[0046]);

wherein the second non global zone is a separate and distinct OS partition of the global operating system environment (paragraphs [0035]-[0036] and [0045]-[0046]); and

wherein the first and second non-global zones are established by the OS kernel (paragraph [0039]), and wherein the OS kernel enforces zone boundaries to isolate the first set of one or more user processes within the first non-global zone and the second set of one or more user processes within the second non-global zone (paragraph [0041]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the OS Guard of Schaefer as modified by Susser with the teachings of Compartment from Berger because this feature would have further provided a mechanism for groups of processes or threads which are limited to accessing certain subsets of system resources of a computer system, are semi-

isolated portions of a system, and a mechanism for mandatory protection of processes, files and network resources (paragraph [0035] of Berger).

12.   As to claim 29, Schaefer teaches the method of claim 28, wherein the kernel instance provides services (paragraph [0004]) that are invoked by the first set of user processes (paragraph [0012]), and wherein the services are invoked by the first set of user processes through the first virtual platform (paragraphs [0012] and [0019]).

13.   As to claim 32, Schaefer teaches the method of claim 28, wherein a first set of resources are associated with the first non-global zone and a second set of resources are associated with the second non-global zone (paragraphs [0019] and [0022]);

wherein the first set of resources are accessed by the first set of user processes through the first virtual platform and the second set of resources are accessed by the second set of user processes through the second virtual platform (paragraphs [0014], [0019] and [0022]); and

wherein the first set of resources and the second set of resources each include one or more resources from the group consisting of a network interface, a communications interface, a file system, a system console, a DASD address, and an operating system service process (paragraph [0022]).

14.   As to claim 33, Schaefer as modified teaches the method of claim 32, wherein

isolating the first set of user processes within the first non-global zone and the second

set of user processes within the second non- global zone further comprises:

        preventing the first set of user processes (Object 640, Fig. 6 of Susser) from

accessing the second set of resources associated with the second non global zone

(Object 636, Fig. 6, page 10, lines 26-31 and page 11, lines 1-2 and 13-14, e.g.

Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser); and

        preventing the second set of user processes from accessing the first set of

resources associated with the first non-global zone (page 10, lines 26-31 and page 11,

lines 1-2 and 13-14, e.g. Firewall, Context 1, 770, Context 2, 780, Fig. 7 of Susser).

15.   As to claim 34, Schaefer teaches the method of claim 32, wherein executing the

first set of user processes within the first non-global zone causes a first application

environment to be established within the first non-global zone (application 52, Fig. 2,

paragraph [0019] and [0023]), and wherein the method further comprises:

        receiving a command to halt the first non-global zone (paragraph [0024]);

        in response to the command to halt the first non-global zone (paragraph [0019]):

        terminating all user processes executing within the first non-global zone

(unloading virtual environment, paragraph [0024]), thereby terminating the first

application environment (paragraph [0023]); and

        disassociating the first set of resources from the first non-global zone (paragraph

[0024]);

wherein the second non-global zone is not affected by the command to halt the

first non-global zone (paragraph [0019]).

16.   As to claim 35, Schaefer teaches the method of claim 32, wherein executing the

first set of user processes within the first non-global zone causes a first application

environment to be established within the first non-global zone (application 52, Fig. 2,

paragraph [0019] and [0023]), and wherein the method further comprises:

        receiving a command to halt the first non-global zone (paragraph [0024]);

        in response to the command to halt the first non-global zone (paragraph [0019]):

        terminating all user processes executing within the first non-global zone

(unloading virtual environment, paragraph [0024]), thereby terminating the first

application environment (paragraph [0023]); and

        performing one or more tasks from the group consisting of stopping a scheduler

process, unmounting one or more file systems, closing one or more network interfaces,

and removing configurations for devices associated with the first non-global zone (e.g.

unloading virtual environment, paragraphs [0022] and [0024]);

        wherein the second non-global zone is not affected by the command to halt the

first non-global zone (paragraph [0019]).

17.   As to claim 36, Schaefer teaches the method of claim 28, further comprising:

        allowing a first administrator to manage processes and resources within the first

non- global zone (paragraph [0062]), wherein the first administrator is not allowed to

manage processes and resources within the second non-global zone (paragraphs

[0033] and [0062]); and

allowing a second administrator to manage processes and resources within the

second non-global zone (paragraph [0062]), wherein the second administrator is not

allowed to manage processes and resources within the first non-global zone

(paragraphs [0033] and [0062]).

18.   As to claim 37, Schaefer as modified teaches the method of claim 28, wherein

establishing the first non-global zone comprises:

accessing configuration information associated with the first non-global zone

(paragraphs [0024] and [0062] of Schaefer);

installing files and directories necessary for the first non-global zone to function

(paragraph [0024] of Schaefer); and

readying the first non-global zone by performing one or more tasks from the

group consisting of assigning the first zone identifier (e.g. Unique Name, page 11, line

25 of Susser), starting a scheduler process, establishing one or more network

interfaces, mounting one or more file systems, initializing a system console, and

configuring one or more devices (e.g. loading, paragraphs [0022] and [0024] of

Schaefer);

wherein readying the first non-global zone does not include executing user

processes within the first non global zone (page 11, lines 29-31 of Susser).

19.   As to claim 38, Schaefer as modified teaches the method of claim 37, wherein

the configuration information comprises one or more parameters from the group

consisting of a zone name (e.g. Unique Name, page 11, line 25 of Susser), a path to a

root directory for the first non-global zone, specification of one or more file systems to

be mounted when the first non-global zone is readied, specification of one or more

network interfaces, specification of one or more devices to be configured when the first

non global zone is readied, and specification of resource controls to be imposed on the

first non-global zone (paragraph [0026] and [0040] of Schaefer).

20.   As to claim 39, Schaefer teaches the method of claim 28, wherein executing the

first set of user processes within the first non-global zone comprises:

        executing an initialization process (Process Manager 120, Fig. 4, paragraph

[0020]); and

        initializing, by the initialization process, execution of the first set of user

processes (paragraphs [0022]-[0023]).

21.   As to claims 40-41, these claims are rejected for the same reasons as claims 28-

39 respectively, since claims 40-41 recite the same or equivalent invention, see the

rejections to claims 28-29 above.

22.   As to claims 44-51, these claims are rejected for the same reasons as claims 32-

39 respectively, since claims 44-51 recite the same or equivalent invention, see the

rejections to claims 32-39 above.

23.   As to claim 52, this claim is rejected for the same reasons as claim 1 since claim

52 recites the same or equivalent invention, see the rejection to claim 1 above.

24.   As to claim 55-58, this claim is rejected for the same reasons as claim 32-35

since claim 55-58 recites the same or equivalent invention, see the rejection to claim

32-35 above.

25.   As to claims 59-60, these claims are rejected for the same reasons as claims 37-

38 respectively, since claims 59-60 recite the same or equivalent invention, see the

rejections to claims 37-38 above.

Response to Arguments

26.   Applicant's arguments with respect to the 35 U.S.C. 101 rejection of claims 40-41

and 44-51 have been fully considered but they are not persuasive.

(1) Applicants would like to point out that, as they stand, claims 40-41 and

44-51 do not recite a "machine-readable medium" but rather a "machine-

readable storage medium". It is well known that waves are transitory, and

hence are incapable of storing anything (e.g. instructions, as recited in

claims 40-41 and 44-51). Therefore, waves do not qualify as storage media.

Since claims 40-41 and 44-51 specifically recite a "machine-readable

storage medium", these claims do not encompass waves (page 18, lines 4-

10).

In response to argument (1), Applicant's arguments have been considered but

Applicant's does not disclose a machine readable storage medium, only a machine

readable medium is disclosed (paragraphs [0092]-[0093] Applicant's specification). See

the 35 U.S.C. 101 rejection above.

27.   Applicant's arguments with respect to claims 28-29, 32-41, and 44-52 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

28.   The prior art made of record on the accompanying PTO-892 and not relied upon,

is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KimbleAnn Verdi whose telephone number is (571)270-

1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 29, 2008
KV

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194